This invention relates to the dispensing of decorative materials in the form of flowable semi-liquids, pastes and the like such as cake icings, and more particularly to a decoration material dispenser and method of making same.

It is common practice to prepare flowable decorative materials such as semi-liquids, pastes and the like and then place them in a cylinder having a discharge end and a piston which is moved in the cylinder to force the decorative material from the discharge end. It is also desirable to have various arrangements of the flow from the discharge end of the device and different nozzles may be placed on the discharge end with each nozzle having a different orifice arrangement to facilitate the making of different designs in the application of the decorative material to the surface being decorated. With such an arrangement, it is also desirable to have different cylinder devices for each color or to empty the cylinder, clean same and place a different colored material therein for further application and, when the decoration is completed, there is the additional work of cleaning the equipment and storage of same.

The principal objects of the present invention are to provide a decorative dispenser that is disposable after use; to provide a decorative dispenser in which an applicator nozzle and flowable materials for use in decorating are contained in a closed, thin-walled flexible container with a severance indicia thereon for opening same whereby the nozzle may be moved to project the orifice end from the opening with the margins of the opening sealingly engaging the nozzle and then, by twisting, squeezing or otherwise deforming the container, the flowable decorative material is extruded from the nozzle orifice; to provide such a dispensing container in the form of a thin-walled flexible envelope preferably of generally rectangular shape; to provide such a container formed of film of synthetic resin or the like that is compatible with and adapted to contain the flowable decorative material such as edible material; to provide such a decoration dispenser and method of making same whereby the decoration material is sealed in the closed container and protected against contamination or deterioration until time for use; to provide such a dispenser wherein certain ingredients are sealed in a flexible container which is opened and other ingredients added for mixing to form flowable material to be mixed, the container then having the opening closed and a nozzle extended from within the container for dispensing of the flowable material; and to provide such a decoration dispenser that is economical to manufacture, easily stored and shipped, that is readily adapted for dispensing of the material therefrom and is easily disposable after use.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings wherein are set forth by way of illustration and example certain embodiments of this invention.

FIG. 1 is a perspective view of an empty open container with the nozzle being inserted therein.

FIG. 2 is a side elevation of the dispensing container with decorative material ingredients and nozzle positioned therein and the container sealed.

FIG. 3 is a perspective view of the container shown in FIG. 2 with an end opened and liquid ingredients added therein.

FIG. 4 is a perspective view of the container with the open end closed.

FIG. 5 is an elevational view showing the movement of the nozzle into position prior to severing the container.

FIG. 6 is a side elevation of the container after severing same with the nozzle being projected from the opening of the container.

FIG. 7 is a side elevational view of the container in position for dispensing decorative material therefrom.

FIG. 8 is an enlarged partial sectional view through the nozzle and container taken on the line 8—8, FIG. 7.

FIG. 9 is a transverse sectional view through the nozzle and container taken on the line 9—9, FIG. 8.

FIG. 10 is an elevational view of the container 1 having walls 2 capable of being deformed to form the contours thereof. The decorative material 3 contemplated is characterized by being flowable, preferably a semi-liquid, or paste, and of a nature that it will dry or harden when exposed to air. Decorative material ingredients 4 preferably in dry form are sealed in the container from any exposure whereby it is maintained in a sanitary, usable condition during storage. Decorative material such as cake icings and the like being edible, the container 1 should be of a material that is compatible with the decorative material, inert to any chemical reaction therein and substantially impermeable to protect the contents from moisture, air or other material with which the container may come in contact. A preferred enclosing material is a thin-walled film that is flexible and easily sealable, as for example, synthetic resins that may be used in packaging edible materials, such as polyethylene, polypropylene and similar flexible plastics and the like that are sealable, as for example, by heat sealing.

As shown in FIGS. 1 and 2, a most convenient form of a container 1 consists of an elongate envelope having flexible side or opposed walls 5 joined at side edges 6 and 7 and bottom edge 8 with an open end 9 prior to filling thereof. The envelope may be formed of two sheets of film and heat sealed along the side and bottom edges or may be a single sheet of film folded along one edge and sealed on the others or in the form of an elongate tube sealed at the end or bottom edge. It is preferred that the envelope be elongated and generally rectangular to provide bottom corners 10 and 11 and that said container have suitable indicia or marking, as for example, a line 12, indicating a location for severance when the envelope is opened. It is preferred that the severance line be adjacent to one of the corners, as for example the corner 11, as illustrated in FIGS. 1 and 2.

A dispensing nozzle 13 adapted to be used in the dispensing of decorative material is preferably formed of suitable synthetic resin that is compatible with the decorative material and preferably molded in a substantially rigid structure. The nozzle is preferably arranged whereby the exterior surface 14 is tapered from a discharge end 15 to an inlet end 16 with the inlet end the larger in cross-section. In the illustrated structure, the exterior surface 14 is generally frusto-conical in shape with the walls 17 defining a generally axial bore 18 opening as at 19 at the large end or inlet end 16 and extending to the other or discharge end 15 which has a wall 20 provided with discharge orifices 21 communicating with said bore. It is contemplated that the discharge end 15 of the nozzle may be shaped and arranged with different size and shapes of orifices whereby the cross-section of the material extruded therethrough may be in one or more streams...
for facilitating application of different designs of decoration.

In preparing the decoration dispenser, the open envelope or container, as illustrated in FIG. 1, is prepared. The decorative material may be in liquid or flowable form, or solid, ready for use and sealed in the container; however, it is preferred that dry ingredients be sealed in the container and said container opened and liquid ingredients added to form a flowable decorative material when desired. The decorative material ingredients are preferably in granular or divided form and then the upper marginal portions 23 are then brought together and suitably sealed as by heat sealing, it being preferred that substantially all air be excluded from the container by bringing the side walls 5 together from the upper surface of the decorative material 4 to the marginal portions 23 and then to the upper marginal edges sealed as at 23. The dispenser is then in condition for shipping and storage.

The severance indicia 12 is arranged on the container whereby, when severed, an opening 24 formed thereby will have a cross-sectional area substantially corresponding to the cross-sectional area of the nozzle 13 substantially intermediate the ends thereof.

When it is desired to use the decoration dispenser for applying decorative materials, the upper seal of the container is severed therefrom to open the container. Then liquid ingredients, as for example, water or other suitable material, is introduced into the container, as illustrated in FIG. 3. After the liquid is introduced, the open end is suitably closed as by tying a knot 23 in the upper portion, as illustrated in FIG. 4. The container walls are then worked to mix the ingredients to form the flowable decorative material 3. The container then is inverted whereby the flowable decorative material 3 will tend to move toward the upper portion of the envelope and the side walls 5 are grasped by the person's hand adjacent the nozzle contained in the envelope to move same substantially to a position as illustrated in FIG. 5. The container is then severed on the indicia or line 12 and, by pressing the side walls 5 together, adjacent the nozzle 13, the discharge end of the nozzle is projected from the opening 24. Furthermore, by the margins 25 of the container adjacent the opening 24 are distended and tightly engaged around the outer surface 14 of the nozzle, as illustrated in FIG. 8, the engagement providing a friction tendency to hold the nozzle in position and also forming a sealing engagement between the margins 25 and the surface 14 of the nozzle whereby the contents of the container cannot leak therebetween. The container is then inverted whereby the nozzle 13 is downwardly. Then the upper portion of the container may be twisted, squeezed or otherwise deformed to apply pressure to the flowable decorative material 3 in the container 1 to force same through the orifices 21 of the nozzle forming extruding streams of decorative material whereby movement of the container and nozzle over the surface being decorated will permit application of designs thereon. If a patterned design is applied, as for example one color, another container of decorative material of another color and with a desired nozzle in the container is opened and the nozzle positioned and the dispenser used in the same manner whereby the contents thereof are extruded. If all of the contents of a container are not used in a decorative operation, and it is desired to save them for future use, the container may be turned whereby the contents will flow away from the nozzle 13. The nozzle may then be fed back into the envelope from the container and the sides of the envelope forced together to extrude the air therefrom, and the portion of the container adjacent the opening 24 held together by a suitable manner as by rolling or tying same whereby the contents will be protected for a period of storage. When the contents are sufficiently used, the envelope and nozzle are easily disposed as they are relatively inexpensive and take up small space.

It is to be understood that while I have illustrated and described one form of my invention, it is not to be limited to the specific form or arrangement of parts hereinafter described and shown except insofar as such limitations are included in the claims heretofore described. What I claim and desire to secure by Letters Patent is:

1. In the art of applying decorative materials wherein flowable decorative materials are extruded through a nozzle having a dispensing orifice, a quantity of flowable decorative material contained in a closed container, said container being an elongated thin-walled flexible envelope of generally rectangular shape and having corners, a dispensing nozzle having a tapered generally conical exterior with a bore opening at the large end of the nozzle and communicating with a dispensing orifice at the small end of said nozzle, said nozzle being loosely disposed and free to move in said closed container and the decorative material therein, said container having a severance line adjacent an edge whereby upon severance an opening of a cross-section intermediate in size relative to the large and small ends of the nozzle is formed and when extended, substantially, and projects from the envelope and the intermediate portion forcibly engages the margins of the envelope adjacent said opening to distend same into surrounding sealing engagement with said nozzle intermediate its ends and squeezing of the container will extrude decorative material therefrom through the dispensing orifice.

2. In the art of applying decorative materials wherein flowable decorative materials are extruded through a nozzle having a dispensing orifice, a quantity of flowable decorative material contained in a closed container, said container being an elongated thin-walled flexible envelope of generally rectangular shape and having corners, a dispensing nozzle having a tapered generally conical exterior with an axial bore opening at the large end of the nozzle and communicating with a dispensing orifice at the small end of said nozzle, said nozzle being loosely disposed and free to move in said closed container and decorative material therein, said container having a severance line adjacent one corner whereby upon severance at said line an opening of a cross-section intermediate in size relative to the large and small ends of said nozzle is formed and when extended, substantially, and projects from the envelope and the intermediate portion of the nozzle forcibly distending margins of the envelope adjacent said opening into surrounding and sealing engagement with said nozzle intermediate its ends and squeezing of the container will extrude decorative material therefrom through the dispensing orifice.

3. The process of forming, filling, and thereafter dispensing from, a decoration dispenser comprising, forming an elongated envelope having an opening adjacent one end and a severance indicia adjacent the other end, inserting a nozzle of generally conical shape having a bore extending from the large end and terminating in a dispensing orifice at the small end thereof into said envelope, introducing a flowable quantity of decorative material through said opening into said envelope to partially fill same, securing portions of the envelope together between said decorative material therein and said opening to close said envelope and form a closed container having the nozzle and decorative material movable thereinafter, turning the surface being decorated whereby the nozzle moves away from the severance indicia, severing the envelope along said severance indicia to form an opening therein of a cross-section size substantially corresponding to the size of the cross-section of the a portion of the nozzle intermediate its ends and moving the small end of the nozzle through said opening whereby it projects from the envelope.
lope and forcing the nozzle into engagement with the margins of the envelope adjacent said opening to distend same and effect a sealing engagement thereof with said nozzle intermediate its ends so that decorative material is extruded from the envelope through the dispensing orifice in response to squeezing of said envelope.

4. The process of forming, filling, and thereafter dispensing from, a decoration dispenser comprising, forming an elongated envelope of generally rectangular shape when flat, said envelope having a fill opening adjacent one end and a severance indicia across a corner adjacent the other end, inserting a nozzle of generally conical shape having a bore extending from the large end and terminating in a dispensing orifice at the small end thereof through said fill opening into said envelope whereby it moves to a position in the envelope remote from said fill opening, introducing a flowable decorative material through said fill opening into said envelope to substantially fill same, bringing portions of the envelope adjacent said fill opening together to extrude air from said envelope, sealing the margins of the envelope adjacent said fill opening to close said envelope and form a closed container having the nozzle and decorative material therein, turning the envelope whereby the flowable material moves away from the severance indicia, moving the nozzle adjacent the severance indicia, severing the envelope along said severance indicia to form a discharge opening therein of a cross-section intermediate the cross-section of the large and small ends of the nozzle, moving the small end of the nozzle through said opening whereby it projects from the envelope and forcibly moving said nozzle outwardly relative to said opening and engaging said nozzle intermediate its ends with margins of the envelope adjacent said opening to distend said margins and effect sealing engagement thereof with said nozzle so that decorative material will extrude from the envelope through the dispensing orifice in response to squeezing of said envelope.

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